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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Art Unit: 1645
JIANG, et al.	)	Examiner: MAASHO, K.
Serial No.: 10/502,085	)	Washington, D.C.
Filed: April 12, 2005	)	September 13, 2007
For: IMMUNOSTIMULATORY,	)	Docket No.: JIANG=4A
COVALENTLY LIPIDATED	)	Confirmation No.: 3733
OLIGONUCLEOTIDES	)	

ELECTION WITH PARTIAL TRAVERSE

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S i r :

In response to the restriction requirement mailed August 17, 2007, Applicants respond as follows:

1. Applicants elect group I (claims 1-68, 72-81 and 100), without traverse.

2. Applicants make the following species elections, with traverse:

A) lipophilic group (c).

B) R is the tenth structure shown in the office action, that is, the proximal carbon is linked to two lipid tails via -O- linkage, and a hydroxyl is also linked to the proximal carbon.

C) monosaccharide is pentose

D) strand is DNA

The two suggested species (DNA or RNA) were presumably inspired by claim 30. However a third choice (an oligonucleotide at least part of whose backbone differs from that of DNA and RNA) should probably have been suggested, based on claims 36 and 41.

We would still have elected DNA.

E) lipophilic group is incorporated into a "free end".

It is respectfully noted that the term "free end" includes both 5' and 3' ends, as is clear from page 45, lines 10-12 and 16-18. Thus, two of the three species suggested by the examiner, "free end" and "3' end", are not mutually exclusive. Species restriction is proper only if the species are mutually exclusive, see MPEP 806.04(f).

It is possible that the reference to "3' end" as a possible species was erroneous, and that the Examiner intended to have us choose between a free end and an internucleoside linkage. If so, then the election of "free end" is sufficient.

If in view of the foregoing, the Examiner determines that we must choose between a 5' end and a 3' end, then we elect 3' end.

F) linker Z is  $-\{\text{CH}_2\text{CH}_2\text{O}\}_n-$ .

It is noted that this election is meaningful only if we chose a strand other than DNA or RNA in D), and also chose the phosphate-Z-phosphate for G). We did neither.

Once again, the species suggested by the Examiner are not mutually exclusive. The elected  $-\{\text{CH}_2\text{CH}_2\text{O}\}_n$  is a subset of  $-\{\text{small alkyl -O}\}_n$ , which in turn is a subset of aliphatic. See, e.g., page 41, line 29 to page 42, line 2. Thus, the suggestion violates MPEP 806.04(f). We could be asked to elect a single chemical entity for Z, in which case we maintain the election noted above.

G) is a phosphate group.

But note that because we elected a DNA strand in D), the dinucleotide unit cannot comprise a non-natural nucleoside as assumed by claims 49-51.

H) PNA

This restriction presumably was inspired by claims 53 (PNA) and 54 (GNA). We were only permitted the choices of PNA or GNA, hence we elected PNA. However, we wish to point out that the dinucleotide unit may be DNA or RNA, in accordance with claim 30, the dinucleotide unit being part of the "strand"/"oligonucleotide". And in D) above, we elected DNA.

If the Examiner revises this species restriction to permit us to elect DNA, RNA, PNA or GNA for the dinucleotide unit, we elect DNA, consistent with D) above.

I) epitope is peptide.

J) internucleoside linkage is phosphate (not poly(ethyleneimine)).

This species restriction is based on claim 100. But claim 100 doesn't require one of the three listed internucleoside linkages, rather, it says that the internucleoside linkage is none of the three. So requiring us to elect one of the three excluded linkages makes no sense.

Since D) only permitted us to elect DNA or RNA, wherein the internucleoside linkage by definition is phosphate, see page 32, lines 20-25, and we elected "DNA", we believe that we must be permitted to elect, in response to J), "phosphate" as the internucleoside linkage. Phosphate, of course, is not any of the three linkages excluded by claim 100.

3. Species restrictions A)-J) are traversed on the grounds that generic claims are allowable.

Additionally, species restrictions E), F), H) and J) are traversed for the reasons explained in section 2 above.

4. The Examiner concedes that claims 1, 4-8, 12-14, 20, 21, 59 and 85 are generic.

The Examiner identifies claims potentially affected by the species restriction as follows:

- A) Claims 9, 11
- B) Claims 10, 11
- C) Claims 22, 23, 24, 25, 26
- D) Claim 30
- E) Claims 31, 32, 34
- F) Claims 46, 47, 48
- G) Claims 49, 50, 51
- H) Claims 53, 54
- I) Claims 60, 61, 62, 63, 64, 86, 87, 88, 89, 90
- J) Claim 100.

It should be noted that while claims 9 and 11, relate to the nature of the lipophilic group, and hence are potentially affected by the species elected for A, they are generic from the point of view of species restrictions B)-J). Analogous arguments apply to the other claims identified above, that is, they can be non-generic to one species restriction and generic relative to the others.

Group I claims 2, 3, 15-19, 27-29, 33, 35-45, 52, 55-58, 65, 68, 72-81 are neither identified by the Examiner as generic nor deemed to correspond to species. We respectfully urge that (with the exception of claims 36-45) they are generic because they don't limit the choice of species with respect to any of species restrictions A)-J).

We believe that all of the group I claims, except for those listed below, read upon all of the elected species for A)-J):

10, 34 (assuming there is not another lipophilic group in a free end), 36-51 (in view of election D, DNA strand), and 53-54 (ditto). Thus, only those claims and the groups II-IV claims are withdrawn.

Note that this means that all of the claims deemed by the Examiner to correspond with F), G), or H) are withdrawn, the Examiner not having appreciated the inapplicability of F), G) or H) if DNA or RNA were elected in response to D1.

Please note that while we elected presentation of a peptide epitope, the same molecule can present both a peptide epitope and a carbohydrate epitope, e.g., both the peptide epitope PDTRP and the carbohydrate epitope Tn or sialyl Tn, see page 89, lines 21-24; page 90, lines 26-28; page 73, lines 22-24. Hence, claim 60 still reads on the elected species despite election of peptide epitope in response to I). Claim 60 will of course be examined only to the extent that it reads on a molecule also comprising, as elected, a peptide epitope.

Respectfully submitted,

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